AMENDMENT AND PRESENTATION OF CLAIMS

Please replace all prior claims in the present application with the following claims:

1. (Previously Presented) A communication apparatus for routing over a radio network, the apparatus comprising:

an air interface configured to receive a packet over the radio network, the packet being destined for a destination host, wherein the radio network supports meshed connectivity;

a communication interface coupled to the air interface; and

logic for determining whether the destination host is reachable by the communication interface based upon a route table,

wherein if the destination host is determined not to be reachable, the logic redirects the packet over the radio network according to the route table,

wherein a route server within the radio network is configured to collect routing information from a plurality of terminals including the source terminal, the routing information specifying reachability of a host or a network connected to a corresponding one of the terminals, the route table being updated based on the collected routing information.

2. (Original) An apparatus according to claim 1, wherein the radio network is a satellite network.

3. (Original) An apparatus according to claim 1, wherein the logic operates according to a prescribed protocol for providing on-demand dynamic routing of the packet over the radio network.

4. (Original) An apparatus according to claim 1, wherein the air interface receives a message from a route server for updating of the route table.

5. (Original) An apparatus according to claim 4, wherein the message includes:

a field for specifying a version of the prescribed protocol;

a field for specifying an entry to the route table; and

a field for specifying version of the entry of the route table.

6. (Original) An apparatus according to claim 4, wherein the message is multicast from the route server.

7. (Canceled)

8. (Previously Presented) An apparatus according to claim 1, wherein the route server performs routing metric computations for the terminals based on the collected routing information.

9. (Previously Presented) An apparatus according to claim 1, wherein the route server applies network wide routing policies based on the collected routing information to update the route table.

10. (Previously Presented) A communication apparatus for routing over a radio network, the apparatus comprising:

a first interface means for receiving a packet over the radio network, the packet being destined for a destination host, wherein the radio network supports meshed connectivity;

a second interface means coupled to the first interface means;

means for determining whether the destination host is reachable by the second interface means based upon a route table; and

means for redirecting the packet over the radio network according to the route table if the destination host is determined not to be reachable,

wherein a route server within the radio network is configured to collect routing information from a plurality of terminals including the source terminal, the routing information specifying reachability of a host or a network connected to a corresponding one of the terminals, the route table being updated based on the collected routing information.

11. (Original) An apparatus according to claim 10, wherein the radio network is a satellite network.

12. (Original) An apparatus according to claim 10, wherein the redirecting means operates according to a prescribed protocol for providing on-demand dynamic routing of the packet over the radio network.

13. (Original) An apparatus according to claim 10, wherein the first interface means receives a message from a route server for updating of the route table.

14. (Original) An apparatus according to claim 13, wherein the message includes:

a field for specifying a version of the prescribed protocol;

a field for specifying an entry to the route table; and

a field for specifying version of the entry of the route table.

15. (Original) An apparatus according to claim 13, wherein the message is multicast from the route server.

16. (Canceled)

17. (Previously Presented) An apparatus according to claim 10, wherein the route server performs routing metric computations for the terminals based on the collected routing information.

18. (Previously Presented) An apparatus according to claim 10, wherein the route server applies network wide routing policies based on the collected routing information to update the route table.

19. (Previously Presented) A method for routing over a radio network, the method comprising:

receiving a packet over the radio network, the packet being destined for a destination host, wherein the radio network supports meshed connectivity;

determining whether the destination host is reachable by a communication interface based upon a route table; and

selectively redirecting the packet over the radio network according to the route table,

wherein a route server within the radio network is configured to collect routing information from a plurality of terminals including the source terminal, the routing information specifying reachability of a host or a network connected to a corresponding one of the terminals, the route table being updated based on the collected routing information.

20. (Original) A method according to claim 19, wherein the radio network in the receiving step is a satellite network.

21. (Original) A method according to claim 19, wherein the packet is redirected according to a prescribed protocol for providing on-demand dynamic routing of the packet over the radio network.

22. (Original) A method according to claim 19, further comprising:

receiving a message from a route server for updating of the route table.

23. (Original) A method according to claim 22, wherein the message includes:

a field for specifying a version of the prescribed protocol;

a field for specifying an entry to the route table; and

a field for specifying version of the entry of the route table.

24. (Original) A method according to claim 22, wherein the message is multicast from the route server.

25. (Canceled)

26. (Previously Presented) A method according to claim 19, wherein the route server performs routing metric computations for the terminals based on the collected routing information.

27. (Previously Presented) A method according to claim 19, wherein the route server applies network wide routing policies based on the collected routing information to update the route table.

28. (Original) A computer-readable medium bearing instructions for routing, said instruction, being arranged, upon execution, to cause one or more processors to perform the method of claim 19.

29. (Previously Presented) A method of supporting intra-domain routing, the method comprising:

receiving, at a route server, routing information from one of a plurality of route clients, the route clients being in communication with the route server over a first data network that is fully meshed, wherein the routing information specifies reachability of a host that is within a second data network served by the one route client;

modifying a route table of the route server in response to the received routing information;

transmitting a message based on the modified route table to the route clients for updating of respective route tables of the route clients;

receiving a heartbeat message from the one route client; and

in response to the received heartbeat message, transmitting a rejoin message to the one route client to initiate transmission of the routing information.

30. (Original) A method according to claim 29, wherein the first data network in the receiving step is a satellite network, and the second data network is a terrestrial network.

31. (Original) A method according to claim 30, further comprising:

maintaining a list of the route clients that are inactive, wherein said clients, in an inactive state, do not provide routing information to the route server.

32. (Original) A method according to claim 29, wherein the message is partitioned into a plurality of packets for transmission to the route clients, each of the packets having a sequence number for the route clients to assemble the transmitted message.

33. (Original) A method according to claim 29, further comprising:

determining the number of the route clients that are to receive the message; and

comparing the number with a threshold, wherein the message is selectively transmitted as a multicast to the route clients based on the comparison.

34. (Canceled)

35. (Original) A method according to claim 29, wherein each one of the route clients in the receiving step is configured to redirect a packet received from another one of the route clients.

36. (Original) A computer-readable medium bearing instructions for routing, said instruction, being arranged, upon execution, to cause one or more processors to perform the method of claim 29.

37. (Previously Presented) A method of supporting intra-domain routing over a satellite network, the method comprising:

determining routes reachable over a terrestrial interface;

transmitting routing information associated with the reachable routes over a satellite interface communicating with the satellite network to a route server, wherein the route server modifies a database storing routes reachable over the satellite network based on the routing information, the satellite network being fully meshed; and

selectively receiving routes reachable via the satellite interface from the route server, wherein the route server is configured to determine whether the routes reachable via the satellite interface is to be transmitted as a multicast or a unicast based a threshold relating to a number of the route clients that are to receive the routes reachable via the satellite interface.

38. (Original) A method according to claim 37, further comprising:

executing a first routing protocol associated with the terrestrial interface; and

executing a second routing protocol associated with the satellite interface.

39. (Original) A method according to claim 37, wherein the routes in the receiving step is transmitted by the route server as a plurality of messages, the method further comprising:

buffering the plurality of messages according to sequence numbers corresponding to the respective messages.

40. (Canceled)

41. (Original) A method according to claim 37, further comprising:

transmitting a heartbeat message to the route server; and

receiving a rejoin message, in response to the transmitted heartbeat message, to initiate transmission of updates to the routes reachable over the terrestrial interface.

42. (Original) A method according to claim 37, further comprising:

receiving data at the satellite interface from a first route client;

determining that the data cannot be routed over the terrestrial interface based on the stored routes; and

transmitting the data out of the satellite interface to a second route client.

43. (Original) A computer-readable medium bearing instructions for routing, said instruction, being arranged, upon execution, to cause one or more processors to perform the method of claim 37.

44. (Previously Presented) A server apparatus for supporting intra-domain routing, the apparatus comprising:

an air interface configured to communicate with a radio network supporting communication among a plurality of terminals according to a meshed topology, each of the terminals being configured as a route client, the air interface receiving routing information from one of the terminals, wherein the routing information specifies reachability of a host that is within a data network served by the one terminal; and

memory configured to store a route table that is modified based on the received routing information,

wherein a message is transmitted via the air interface to the terminals based on the modified route table for updating of respective route tables of the terminals,

wherein a heartbeat message is received via the air interface from the one route client, and in response to the received heartbeat message, a rejoin message is transmitted to the one route client to initiate transmission of the routing information.

45. (Original) An apparatus according to claim 44, wherein the radio network is a satellite network.

46. (Original) An apparatus according to claim 45, further comprising:

a processor configured to generate a list of the terminals that are inactive, wherein said clients, in an inactive state, do not provide routing information to the route server.

47. (Original) An apparatus according to claim 44, wherein the message is partitioned into a plurality of packets for transmission to the terminals, and each of the packets having a sequence number, the sequence numbers being employed by the routes to assemble the transmitted message.

48. (Original) An apparatus according to claim 44, further comprising:

a processor configured to determine the number of the terminals that are to receive the message, and to compare the number with a threshold, wherein the message is selectively transmitted as a multicast to the terminals based on the comparison.

49. (Canceled)

50. (Currently Amended) A terminal apparatus for supporting intra-domain routing over a satellite network, the apparatus comprising:

a terrestrial interface configured to communicate with a plurality of network elements;

a processor configured to determine routes reachable to the plurality of network elements; and

a satellite interface configured to transmit routing information associated with the reachable routes to a route server within the satellite network having a meshed configuration, ~~and to receive data from a route client, the data being redirected over the satellite interface in response to a determination that the data cannot be routed over the terrestrial interface based on the stored routes,~~

wherein the route server modifies a database storing routes reachable over the satellite network based on the routing information, and routes reachable via the satellite interface are selectively received from the route server,

wherein the satellite interface transmits a heartbeat message to the route server, the satellite interface receiving a rejoin message, in response to the transmitted heartbeat message, to initiate transmission of updates to the routes reachable over the terrestrial interface.

51. (Original) An apparatus according to claim 50, wherein the processor is further configured to execute a first routing protocol associated with the terrestrial interface, and a second routing protocol associated with the satellite interface.

52. (Original) An apparatus according to claim 50, wherein the routes is transmitted by the route server as a plurality of messages, the apparatus further comprising:

memory configured to buffer the plurality of messages according to sequence numbers corresponding to the respective messages.

53. (Original) An apparatus according to claim 50, wherein the route server is configured to determine whether the routes are to be transmitted as a multicast or a unicast based a threshold relating to a number of route clients that is to receive the routes.

54. (Canceled)

55. (Canceled)